

Claims

- [c1] A vehicle shutdown system comprising:
an ignition-enabling device having at least an ON state and an OFF state; and
an engine controller having a plurality of functions and being coupled to said ignition-enabling device, said engine controller at least temporarily maintaining operation of at least a portion of said controller functions when said ignition-enabling device is switched to said OFF state.
- [c2] A system as in claim 1 wherein said plurality of functions are selected from at least one of an electronic throttle control function, a camshaft position function, a crankshaft position function, a remote start function, a drive-by-wire function, and an ignition system function.
- [c3] A system as in claim 1 further comprising a throttle-controlled device, said engine controller electronically controlling said throttle-controlled device and at least temporarily preventing shutdown of electronic throttle control when said ignition-enabling device is switched to an OFF state.

- [c4] A system as in claim 3 further comprising a switch coupled to said ignition-enabling device and a fuel supply system, said engine controller disabling said fuel supply system upon said ignition-enabling device being switched to said OFF state.
- [c5] A system as in claim 3 further comprising a switch coupled to said engine controller, said engine controller enabling said switch when said ignition-enabling device is in said ON state and at least temporarily preventing disablement of said switch when said ignition-enabling device is in said OFF state.
- [c6] A system as in claim 5 wherein said switch is a power relay.
- [c7] A system as in claim 3 further comprising a throttle actuator position sensor generating a throttle position signal, said engine controller adjusting a position of said throttle-controlled device in response to said throttle position signal.
- [c8] A system as in claim 3 wherein said ignition-enabling device is an ignition start key assembly.
- [c9] A system as in claim 3 wherein said throttle-controlled device is a throttle plate.

- [c10] A system as in claim 3 wherein said engine controller adjusts a position of said throttle-controlled device to be more air flow restrictive than that of said throttle-controlled device in a default position when said ignition-enabling device is switched to said OFF state.
- [c11] A system as in claim 3 wherein said engine controller adjusts a position of said throttle-controlled device to be approximately 1.5° open relative to a closed position when said ignition-enabling device is switched to said OFF state.
- [c12] A system as in claim 1 further comprising a safety monitor receiving an operation status signal from said engine controller when operation of said at least a portion of said controller functions is maintained and said ignition-enabling device is switched to said OFF state.
- [c13] A system as in claim 1 wherein said engine controller is at least a portion of a drive-by-wire system controller.
- [c14] A vehicle shutdown system comprising:
an ignition-enabling device having at least an ON state and an OFF state;
a throttle-controlled device; and
a controller coupled to said ignition-enabling device and electronically controlling said throttle-controlled device,

said controller at least temporarily preventing shutdown of electronic throttle control when said ignition-enabling device is switched to said OFF state.

[c15] A method of powering down a vehicle having a controller with a plurality of functions comprising at least temporarily maintaining operation of at least a portion of said controller functions when said ignition-enabling device is switched to said OFF state.

[c16] A method as in claim 15 further comprising:
electronically controlling a throttle-controlled device;
and
at least temporarily preventing shutdown of electronic throttle control when said ignition-enabling device is switched to said OFF state.

[c17] A method as in claim 16 wherein at least temporarily preventing shutdown of electronic throttle control comprises:
adjusting a position of said throttle-controlled device to further restrict the flow of air over that of a default position when said ignition-enabling device is switched to said OFF state; and
enabling said throttle-controlled device to be in said default position when engine speed is approximately equal to zero.

- [c18] A method as in claim 17 wherein enabling said throttle-controlled device to be in said default position comprises disabling said controller.
- [c19] A method as in claim 17 wherein adjusting a position of said throttle-controlled device comprises adjusting said throttle-controlled device to be at approximately 1.5° from a closed position.
- [c20] A method as in claim 16 further comprising enabling a power switch when said ignition-enabling device is in said ON state and temporarily preventing disablement of said power switch when said ignition-enabling device is in said OFF state.